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A NEW TREATMENT FOR SCREWWORMS IN LIVESTOCK

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A new treatment for screwworm-infested livestock has been developed at the Menard, Tex., laboratory. Although not superior to smear 62, which was developed at the same laboratory a few years ago and since that time has been the recommended treatment, it is nevertheless a satisfactory substitute and should be used if satisfactory materials are not available to make smear 62. Turkey red oil, one of the ingredients of smear 62, has been scarce in recent years, and many of the supplies obtained have been off-grade.

Preparation

The new remedy, which is called EQ smear 82, is composed of the following ingredients (figures in parts by weight):

Diphenylamine.....	35
Benzene (benzol).....	32
Triton X-300 (sodium salt of an alkylated aryl polyether sulfate) ..	2
<u>n</u> -Butyl alcohol.....	10
Lampblack.....	21

The grade of lampblack used in this formula is that ordinarily sold by lumber yards and paint stores for tinting paints. Lampblack appears to increase the killing action of benzene and to impart a greater efficiency to diphenylamine for protecting the wound against infestation. The commercial grade of the other ingredients is used.

The diphenylamine is dissolved in the benzene, preferably by placing the two substances together and allowing them to stand 12 to 24 hours. Solution can be hastened by placing the container in a vessel of hot water and leaving the container uncovered. An open flame should never be used, since benzene is highly inflammable.

The Triton X-300 formerly produced contained 20 percent of active ingredient, whereas the present commercial product contains 30 percent. It will take some time to determine whether this change will affect the performance of the formula. However, the 30-percent material may be diluted to 20 percent by adding 1 volume of water to 2 volumes of the more concentrated product.

The Triton X-300 and the n-butyl alcohol should be placed in a tight container and agitated vigorously until thoroughly mixed. This mixture should be added to the diphenylamine-benzene solution and the combined mixtures shaken again. The lampblack should then

be stirred in gradually. Mixing should be continued until the compound is smooth in texture. The resulting smear should be of about the same consistency as thin pancake batter. It is then ready for use.

Use of the Remedy on Wounds

The smear should be applied to the screwworm-infested wound with a 1-inch paint brush, care being taken to push the material well down into the pockets made by the maggots. The area around the wound where blood and wound exudate have made the animal attractive to flies and susceptible to infestation should be thoroughly painted.

It is not necessary to remove the dead worms from the wound. However, many of the larger dead worms may be removed by wiping with the brush. If the worms are removed, the wound should be re-treated before the animal is released.

To protect uninfested wounds, such as those caused by shear cuts, castration, dehorning, docking, and wire cuts, it is sufficient to cover the raw tissue and surrounding area thoroughly with a coating of the smear. In treating castration wounds some of the material should be pushed slightly into the openings on both sides of the scrotum.

This remedy kills screwworms quickly, and after its application large numbers of them may drop out of the wound, carrying a considerable amount of the protective chemical with them. For this reason it is a good practice to make a second application from 24 to 48 hours after the first to insure proper coating of the wound. Thereafter, under average conditions, regular treatments twice each week should be given until the wound is healed. It is recommended that infested animals be kept in a hospital pasture where this schedule may be followed. When flies are unusually active and abundant, more frequent treatments may be necessary.

Precautions in Preparing and Using This Smear

Prepare the remedy well away from open flames and do not have lighted cigarettes or cigars around during the process.

The benzene in the smear is highly volatile and will evaporate quickly if left in an open container. It is therefore advisable that the smear be kept tightly covered in a cool place when not in use. It is also recommended that only enough for a few days' use be removed at a time from the larger supply container. Even while animals are being treated, the container should be kept covered as

much as possible. In case the smear, through evaporation, becomes too thick for easy application, additional benzene may be stirred in to restore its original consistency.

When infestations near the eyes are being treated, avoid getting the smear into the unaffected parts of the eyes, as the material is irritating. If this is done accidentally, it is advisable to wash the eyes immediately with water.

Do not add oil, grease, or any other substance to the formula, or its efficiency will be greatly impaired, if not entirely destroyed.

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